



SERVICE INFORMATION LETTER

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US DOT RULE CHANGE REQUIRES REPLACEMENT OF PRESSURE RELIEF DEVICE (ALSO REFERRED TO AS SAFETY OUTLET) ON CERTAIN P/N 6350 SERIES CYLINDER AND VALVE ASSEMBLIES (CVA'S) IN ORDER TO SHIP BY AIR AS CARGO OR COMPANY OWNED MATERIAL (COMAT) WHEN FILLED (CHARGED) WITH OXYGEN.

SUMMARY

US DOT has issued a new rule governing the shipment of cylinder and valve assemblies containing oxygen by air as cargo or COMAT after October 1, 2008. The new rule requires a pressure relief device (PRD) with a pressure range from 90 to 100 percent of the cylinder test pressure for cylinder type 3AA. Some AVOX Systems CVA's which include DOT Type 3AA steel cylinders were manufactured with a PRD that does not conform to the new rule.

1. PLANNING INFORMATION

A. Effectivity

(1) Concerned equipment

This Service Information Letter applies to the P/N 6350 Series Cylinder and Valve Assemblies listed in Table 1.

Table 1
End Item P/N's of Affected P/N 6350 Series CVA's

6350A2-BB-B	6350A5-CC-Z
6350A2-CC-B	6350A5-EE-B
6350A2-YYY-B	6350A5-FF-B
6350A4-CC-B	6350A7-CC-Z
6350A4-SSS-B	6350A7-FF-B
6350A4-YYY-B	6350A14-C-AE
6350A5-CC-B	6350A20-CC-C

(2) Aircraft

At the time of this Service Information Letter the affected items were known to be operating on Boeing, Douglas, Piper, Pilatus, and Bell Helicopter aircraft.

(3) On production line

Affected CVA's will not be manufactured after January 1, 2008.

(4) This Service Information Letter also applies to all units held in stores for service on the aircraft listed in (2).

**B. Reason**

- (1) The new US DOT rule (US 49 CFR 173.302(f)) changes the rating of the PRD on a charged CVA when offered for transport aboard an aircraft as cargo or COMAT after the time of the first hydrostatic test and requalification following October 1, 2008.
- (2) This new rule does not affect CVA's installed in aircraft as part of the required equipment for flight unless the CVA is removed and offered for shipment by air as cargo or COMAT.
- (3) It is recommended that the PRD be changed to comply at the next hydrostatic test, but no later than the first hydrostatic test after October 1, 2008.

C. Description

- (1) At the next hydrostatic test, but no later than the first hydrostatic test after October 1, 2008, replace a non-compliant PRD with a PRD that complies with the new rule (see Table 2). There is one PRD on a CVA.
- (2) Install a label on the cylinder to indicate that the cylinder complies with the new rule.

Table 2
Safety Outlet P/N Conversion

Affected CVA P/N	New Safety Outlet P/N	Old Safety Outlet P/N
6350A2-BB-B	800844-03	800844-01
6350A2-CC-B	10689-01	10689-00
6350A2-YYY-B	22608-04	22608-02
6350A4-CC-B	10689-01	10689-00
6350A4-SSS-B	22606-02	22606-01
6350A4-YYY-B	22608-04	22608-02
6350A5-CC-B	10689-01	10689-00
6350A5-CC-Z	10689-01	10689-00
6350A5-EE-B	800844-02	800844-00
6350A5-FF-B	2814-01	2814-00
6350A7-CC-Z	10689-01	10689-00
6350A7-FF-B	2814-01	2814-00
6350A14-C-AE	10689-01	10689-00
6350A20-CC-C	10689-01	10689-00

D. Compliance

This Service Information Letter must be accomplished at the first scheduled hydrostatic test and requalification after October 1, 2008 to enable a CVA filled with oxygen to be transported as cargo or COMAT aboard aircraft.

E. Manpower

- (1) One Technician
- (2) Estimated time: 30 minutes. (No additional manpower will be required if the unit is being overhauled).



2. MATERIAL INFORMATION

A. Material – Availability

See Table 3

B. Industry Support Information

Not applicable.

C. Material necessary for Each Unit

Table 3 lists the parts necessary to accomplish this SIL.

(1) Material to be Purchased

One of the safety outlets and the corresponding label in Table 3 are required for each CVA to be accomplished. Contact a location in section 4. APPENDIX of this SIL for prices.

Table 3
Required Materials

Affected CVA P/N	New Safety Outlet P/N	Qty	Label P/N Min Qty=10	Qty	Availability
6350A2-BB-B	800844-03	1	10014464	1	90 days
6350A2-CC-B	10689-01	1	10014464	1	90 days
6350A2-YYY-B	22608-04	1	10014464	1	90 days
6350A4-CC-B	10689-01	1	10014464	1	90 days
6350A4-SSS-B	22606-02	1	10014464	1	90 days
6350A4-YYY-B	22608-04	1	10014464	1	90 days
6350A5-CC-B	10689-01	1	10014464	1	90 days
6350A5-CC-Z	10689-01	1	10014464	1	90 days
6350A5-EE-B	800844-02	1	10014464	1	90 days
6350A5-FF-B	2814-01	1	10014464	1	90 days
6350A7-CC-Z	10689-01	1	10014464	1	90 days
6350A7-FF-B	2814-01	1	10014464	1	90 days
6350A14-C-AE	10689-01	1	10014464	1	90 days
6350A20-CC-C	10689-01	1	10014464	1	90 days

D. Re-identified Parts

The valve is to be re-identified by stamping a “V” after the P/N on the valve body.

E. Tooling – Availability

Table 4 lists availability.

Contact a location listed in section 4. APPENDIX of this SIL for prices.

Table 4
Special tools

Part Number	Keyword	Availability
2786-S52-1	Driver	90 days

NOTE: The Driver is required for all end items except 6350A5-FF-B and 6350A7-FF-B.

3. ACCOMPLISHMENT INSTRUCTIONS

WARNING: FAILURE TO FOLLOW THE PROCEDURES IN THIS SERVICE INFORMATION LETTER, INCLUDING BUT NOT LIMITED TO FAILURE TO READ AND HEED THE WARNINGS IN THIS SERVICE INFORMATION LETTER, OR ATTEMPTING TO PERFORM ANY OF THE PROCEDURES IN THIS SERVICE INFORMATION LETTER UNLESS TRAINED IN THE PROPER USE AND MAINTENANCE OF AVIATION OXYGEN EQUIPMENT, MAY RESULT IN AN EXPLOSION, ILLNESS, SERIOUS PERSONAL INJURY, OR DEATH.

- A. Read and understand all the information in this Service Information Letter before performing any procedures on the CVA. Perform all procedures in the sequence of operations given. Do not attempt to perform any of the procedures in this Service Information Letter unless you are trained and qualified in the proper use and maintenance of aviation oxygen equipment. Maintenance personnel must know how to avoid the hazards of maintaining aviation oxygen equipment and must comply with all applicable government regulations.

WARNING: FAILURE TO CONTROL HIGH PRESSURE GASEOUS OXYGEN MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

- B. High pressure oxygen is a hazardous material. When pressurized oxygen is discharged intentionally or due to equipment failure, the released energy can be highly destructive if not properly controlled. Do not perform any procedure on an unsecured, charged, cylinder assembly. Also, while oxygen is not a flammable material, it will accelerate combustion and must be considered a fire hazard. Refer to paragraph 3.C. below.

WARNING: CONTAMINATION OF OXYGEN EQUIPMENT BY FAILING TO HANDLE OXYGEN EQUIPMENT IN AN AREA CLEAN OF OIL, GREASE, FLAMMABLE SOLVENTS, OR OTHER COMBUSTIBLE MATERIALS INCLUDING DUST, LINT, AND FINE METAL PARTICLES; CONTAMINATION FROM FAILING TO USE CLEAN HANDS, GLOVES, TOOLS; OR CONTAMINATION BY ANY OTHER MEANS, WHEN HANDLING OXYGEN EQUIPMENT, MAY RESULT IN FIRE OR EXPLOSION THAT MAY CAUSE SERIOUS PERSONAL INJURY OR DEATH.

- C. If oxygen equipment becomes contaminated with oil, grease, flammable solvents, or other combustible materials, fire and explosion may occur. Also, many substances and materials that do not normally burn in air, including dust, lint, and fine metal particles can ignite in the presence of oxygen. Handle oxygen equipment only in a clean area and with clean hands, gloves, and tools.

WARNING: FAILURE TO USE ONLY OXYGEN COMPATIBLE PRODUCTS, EQUIPMENT, AND MATERIALS WHEN CARRYING OUT THE PROCEDURES IN THIS MANUAL, CAN BRING ABOUT A VIOLENT REACTION RESULTING IN FIRE OR EXPLOSION THAT MAY CAUSE SERIOUS PERSONAL INJURY OR DEATH.

- D. Many commonly used materials may react violently in the presence of high pressure oxygen. Only equipment and materials known to be compatible with oxygen should be used. Do not substitute other equipment or materials such as elastomeric o-rings, gaskets, seals, and metal components, even if they look the same.

WARNING: FAILURE TO USE EYE PROTECTION AT ALL TIMES DURING SERVICE OR OVERHAUL PROCEDURES DESCRIBED IN THIS MANUAL MAY CAUSE INJURY TO THE EYES.

- E. Use eye protection at all times during all service or overhaul procedures.



WARNING: FAILURE TO FULLY DISCHARGE THE OXYGEN FROM THE CVA, COMPONENT PARTS, OR TEST SETUP PRIOR TO DISASSEMBLY OF ANY PART MAY CAUSE SERIOUS PERSONAL INJURY OR DEATH.

- F. High pressure oxygen is a hazardous material. When pressurized oxygen is discharged intentionally or due to equipment failure, the released energy can be highly destructive if not properly controlled. Fully discharge the oxygen from the CVA, component parts, and test setup prior to disassembly of any part.

NOTE: This SIL is to be accomplished off-wing. Do not use the OHM 35-21-20 to accomplish this SIL. Follow the steps below which apply during a hydrostatic test, an overhaul, a repair or strictly for the replacement of the safety outlet.

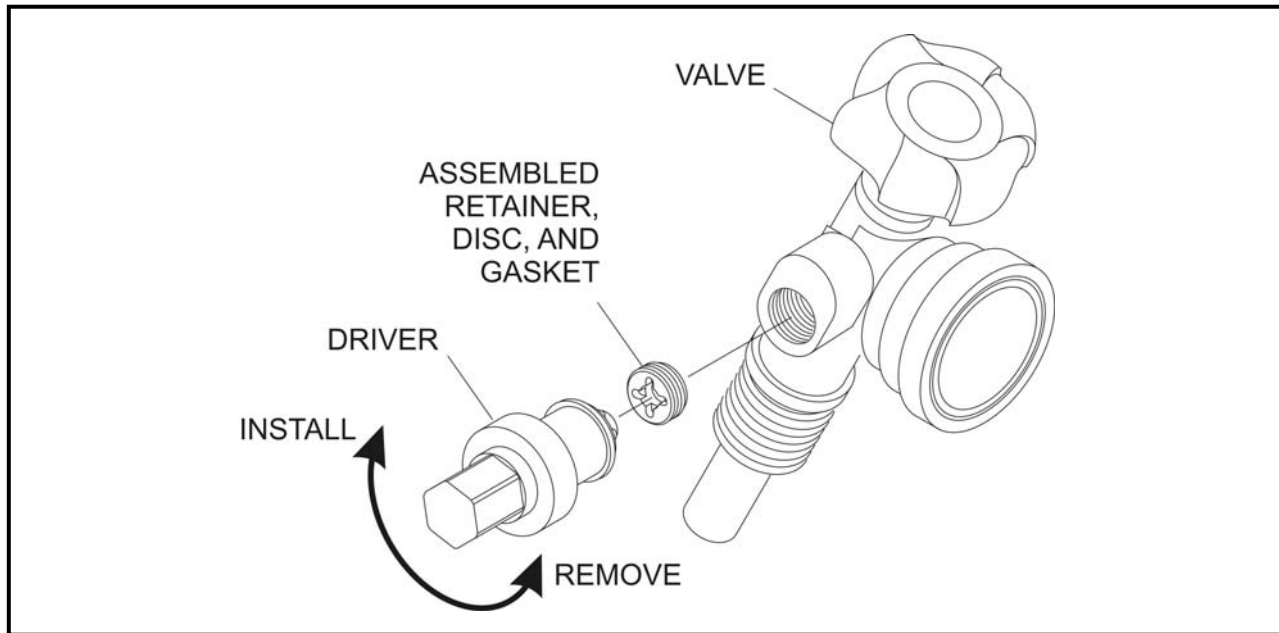
- G. In a clean, grease-free area, bleed the oxygen from the cylinder.
- H. Removal of the valve from the cylinder is optional.
- I. Remove the safety outlet nut and discard. Do step J. next. If the outlet assy is the P/N 2814-00 safety plug assy, remove, discard, and do step L. next.
- J. Remove the insert and discard.
- K. Use the driver (Table 4) to remove the retainer (the disc and gasket are assembled to the retainer) and discard (Figure 1).
- L. Apply a light film of oxygen lubricant to the sealing surfaces of the replacement retainer (the disc and gasket are assembled to the retainer). If the outlet assy is the P/N 2814-01 safety plug assy, apply a light film of oxygen lubricant to the sealing surface.
- M. Use the driver (Table 4) to install the replacement retainer P/N 2786-00 (the disc and gasket are assembled to the retainer) (see Figure 1). Torque the assy to 325 in•lbs (36.7 N•m). Go to step N. Or use a wrench to install the replacement P/N 2814-01 safety plug assy (see Figure 2). Torque the assy to 325 in•lbs (36.7 N•m), then go to step P.
- N. Place the replacement insert P/N 6572-00 in the outlet (see Figure 2).
- O. Thread the replacement safety outlet nut into the outlet (see Figure 2). Torque the safety outlet nut to 300 in•lbs (33.9 N•m).
- P. Stamp a "V" after the P/N on the valve body with a steel stamp to identify that the valve was modified in compliance with this SIL.
- Q. Use the appropriate technical documents to complete the hydrostatic test, overhaul, or repair if required and do a leak test.
- R. After the service has been completed, attach the P/N 10014464 Label (Figure 3) to the cylinder in the location shown in Figure 4.

NOTE: On smaller cylinders the label can be placed in a location just below the identification label.

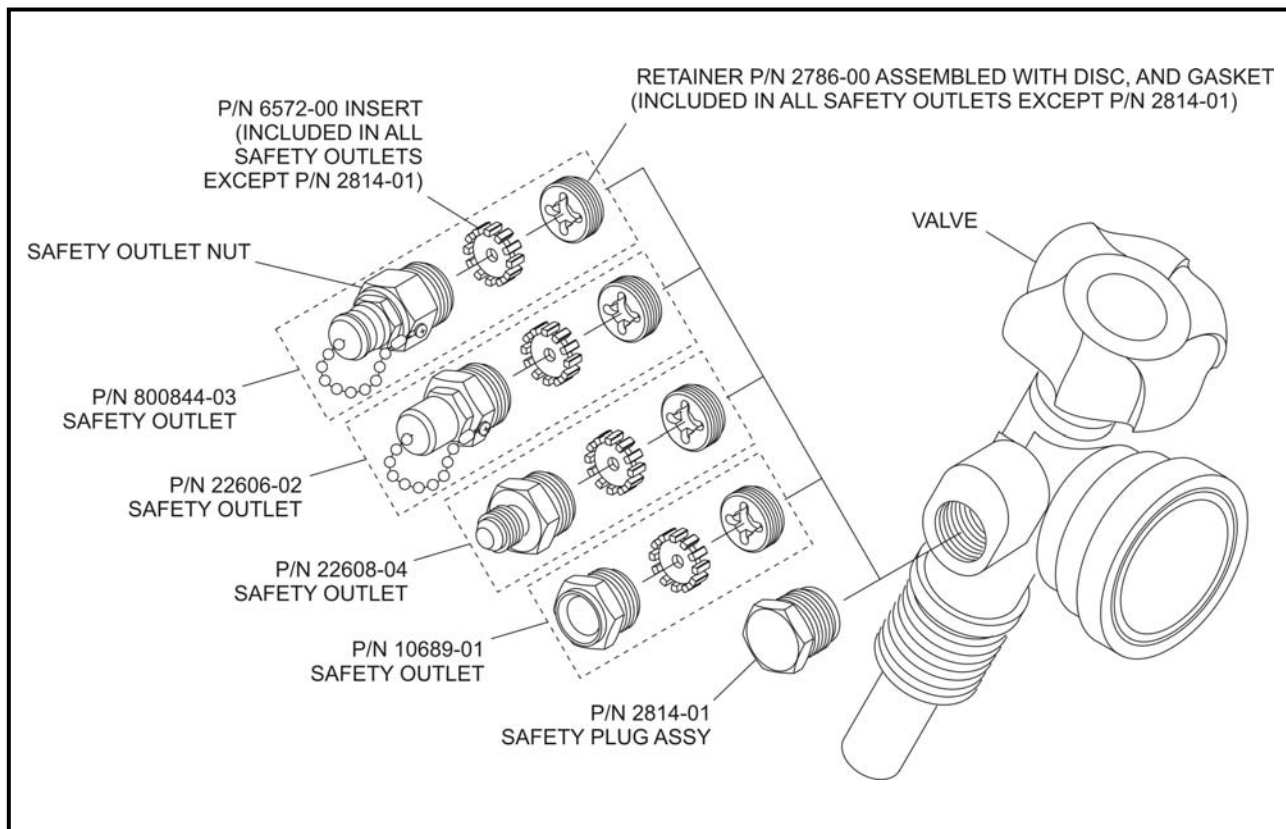
NOTE: Locate the label P/N 10014464 so that it will not be covered by the mounting band that will hold the cylinder after installation.

NOTE: Safety plug assy P/N 2814-01 is a single unit. The disc and gasket are assembled to it. P/N 2814-01 does not require an insert. Only steps I., L., M., P., Q., R. apply to P/N 2814-01

- S. Affected units listed in Table 1 can be shipped in an empty condition to an authorized repair facility listed in the 4. Appendix to have the SIL accomplished.



Use of the Driver to Remove and Install the Retainer
Figure 1

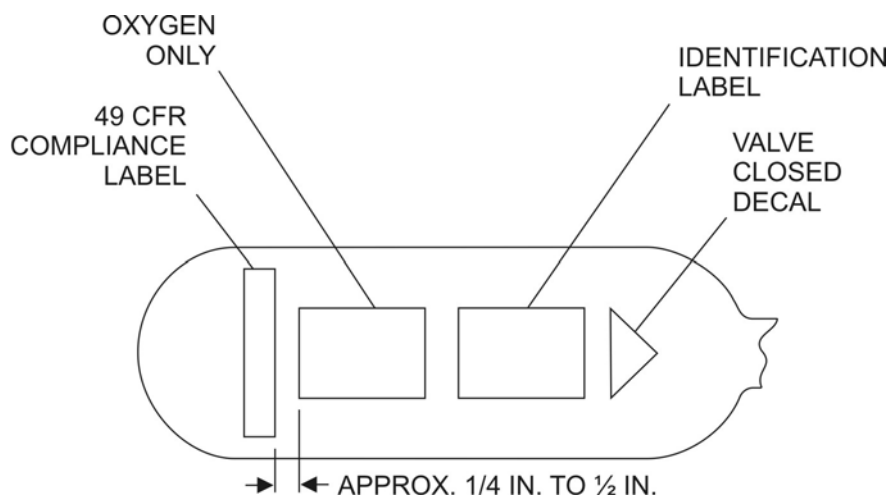


Safety Outlet Installation
Figure 2



**THIS CYLINDER IS EQUIPPED WITH
A PRESSURE RELIEF DEVICE THAT
MEETS THE REQUIREMENTS OF
US 49 CFR 173.302(f)(2)**

US DOT Compliance Label P/N 10014464
Figure 3



Location of the Compliance Label on the Cylinder
Figure 4



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4. APPENDIX

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